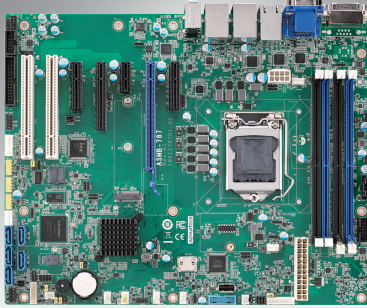


ASMB-787

LGA 1200 Intel® Xeon® W & 10th Gen. Core™ ATX Server Board with 4 x DDR4, 5 x PCIe, 2 x PCI, 4 x USB 3.2, 5 x SATA 3, Quad/Dual LANs, and IPMI

Preliminary



Features

- LGA 1200 Intel® Xeon® W & 10th Gen. Core™ i9/i7/i5/i3 processors with W480E chipset
- DDR4 2933/2666/2400/2133 MHz ECC/Non-ECC UDIMM up to 128 GB
- One Gen 3.0 PCIe x16 link (or two x8 link), two PCIe x4, and one PCIe x1 slots
- Triple displays - DVI-D, VGA, and HDMI 2.0 ports
- Five SATA 3 ports and four x USB 3.2 ports
- One M.2 2280/22110 (SATA / PCIe compatible)
- Rackmount optimized placement with positive air flow design
- 0 ~ 60 °C (32 ~ 140 °F) ambient operating temperature range

Note: Supported OS including Windows 10 (64-bit) and Server 2019 (64-bit) have been validated.

CE FCC

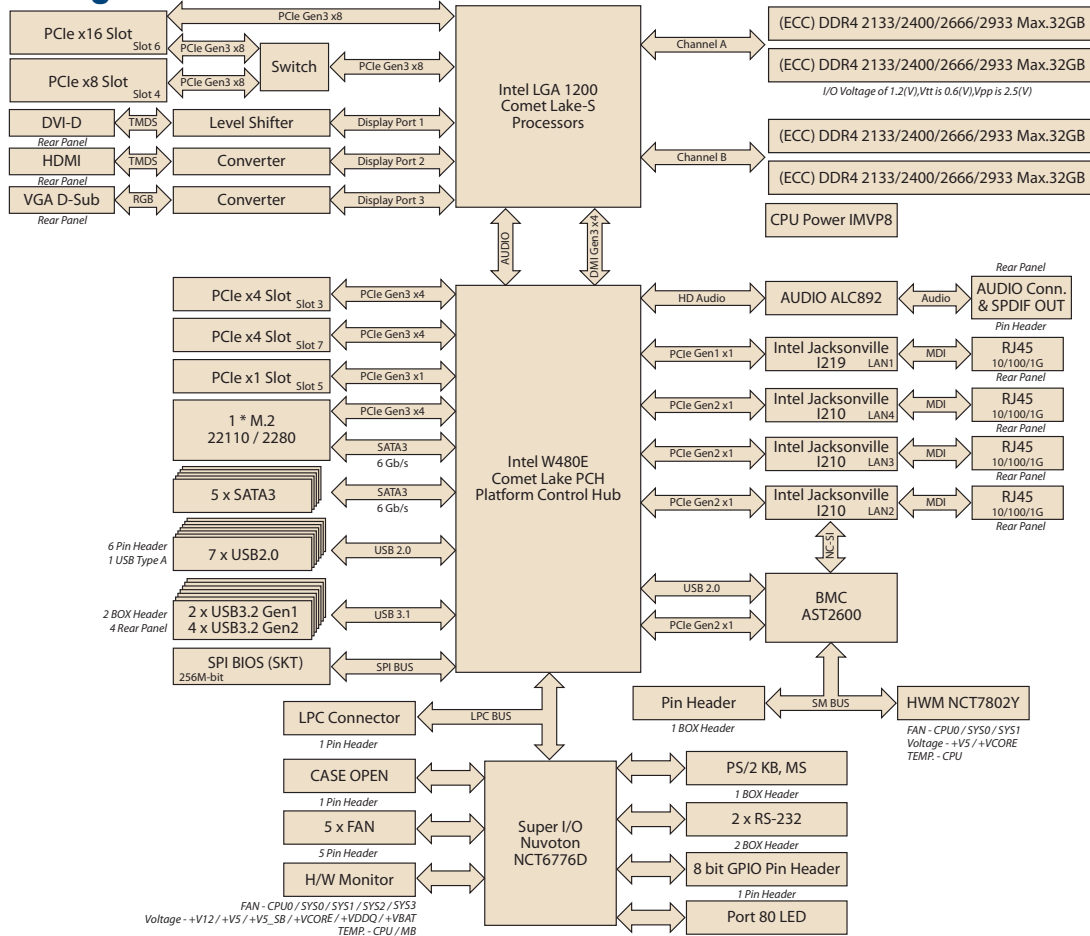
Specifications

| | | | |
|--------------------------|---|---|---------------|
| Form Factor | | ATX form factor | |
| Processor System | Socket | Intel® LGA 1200 | |
| | CPU type | Intel® Xeon® W-1270x/W-1290x and 10th Generation Core™ i3/i5/i7/i9 series (TDP up to 125W) | |
| Core Logic | Chipset | Intel W480E chipset | |
| Memory | Total slots | 4 x (Dual Channel) | |
| | Max. capacity | 128 GB | |
| | Memory type | DDR4 ECC/Non-ECC 2666/2400/2133 MHz UDIMM (288-pin)* | |
| | Memory size | 4 GB, 8 GB, 16 GB, 32GB | |
| Expansion Slots | Total PCI/PCI-X/PCIe slots | 7 | |
| | Slot location 1 | PCI slot | |
| | Slot location 2 | PCI slot | |
| | Slot location 3 | PCIe x4 slot (Gen3 x4 link) | |
| | Slot location 4 | PCIe x8 slot (Gen3 x8 link) | |
| | Slot location 5 | PCIe x1 | |
| | Slot location 6 | PCIe x16 slot (Gen3 x8 or x16 link) | |
| Graphics | Controller | Intel® HD Graphics** | |
| | VRAM | 1 GB maximum shared memory with 2 GB and above system memory installed | |
| Storage | SATA controller | Intel® W480E: 8 SATA 3 6 Gb/s ports with Intel Rapid Storage Technology Enterprise support (for Windows only) (Supports software RAID 0, 1, 10 & 5) | |
| | SAS controller | - | |
| Networking | Interface | 10/100/1000 Mbps | |
| | Controller Connector | GbE LAN1: Intel® I219; GbE LAN 2-4: Intel I210-AT RJ-45 x 2 for G2 version; RJ-45 x 4 for G4 version | |
| Onboard I/O Connector | Printer Port connector | 1 | |
| | PSU connector | 24-pin SSI power connector + 8-pin SSI 12V power connector | |
| | USB connector | 1 x USB 3.2 Gen 1 (2 ports), 3 x USB 2.0 (6 ports), 1 x USB Type-A | |
| | Fan header | 5 x (4-pin) | |
| | SMBus | 1 | |
| | Chassis intruder | 1 | |
| | Front LAN LED | 2 | |
| | Serial port header | 2 x (RS-232) | |
| | Audio connector | 1 x (ALC 892) | |
| PS/2 KB/Mouse | 1 x (Optional PS/2 KB/Mouse cable and bracket required) | | |
| Rear I/O Connector | External serial port | - (via COM cable in the package) | |
| | External USB port | 4 x (USB 3.2 Gen 2) | |
| | VGA port | 1 x (Resolution up to 1920 x 1200 @ 60 Hz) | |
| | DVI port | 1 x (Resolution up to 1920 x 1200 @ 60 Hz) | |
| | HDMI port | 1 x (Resolution up to 4096 x 2160 @ 60 Hz) | |
| | RJ-45 | 2 x for G2 version; 4 for G4 version | |
| | Audio connector | 2 x (Mic-in, Line-out) | |
| PS/2 KB/Mouse | - | | |
| Watchdog Timer | Output | System reset | |
| | Interval | Programmable 1 ~ 255 sec | |
| Power Requirement | Power On | | |
| Environment | | Operating | Non-operating |
| | Temperature Humidity | | |
| Physical Characteristics | Dimensions | 304.8 x 244 mm (12 x 9.6 in) | |

* ECC will not be supported when paired with Core processors.

** Some Xeon processors have no graphic support. Please check Intel specification for processor graphics availability.

Block Diagram



Ordering Information

| Part Number | Chipset | Memory | Display | LAN | SATAIII | IPMI | MADE IN |
|------------------|---------|------------------------|--------------------|-----|---------|------|---------|
| ASMB-787G2-00A1 | W480E | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 2 | 5 | - | China |
| ASMB-787G4-00A1 | W480E | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 4 | 5 | Y | China |
| ASMB-787G2-00A1U | W480E | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 2 | 5 | - | Taiwan |
| ASMB-787G4-00A1U | W480E | DDR4 Non-ECC/ECC UDIMM | VGA + DVI-D + HDMI | 4 | 5 | Y | Taiwan |

Packing List

| Part Number | Description | Quantity |
|----------------|-------------------------------|----------|
| 2001S78610 | Startup manual | x 1 |
| 1700003194 | SATA data cables | x 1 |
| 1700019381 | SATA data cable (right angle) | x 1 |
| 1700022749-11 | SATA power cables | x 2 |
| 1700001788 | COM1 cable | x 1 |
| 1960088021T001 | I/O shield | x 1 |

Optional Accessories

| Part Number | Description |
|------------------|--|
| TBD | LGA 1200 CPU heatsink for 1U chassis |
| TBD | LGA 1200 CPU cooler for 4U chassis (CPU 125W) |
| 1960067860N001 | LGA 1200 CPU cooler for 2U/4U chassis (CPU 95W) |
| 1960052651N021 | LGA 1200 CPU cooler for 2U/4U chassis (CPU under 80W) |
| 1960088060T001 | 1U I/O shield for ASMB-586/587/786/787 |
| 1700008809 | Printer port cable kit (25 cm / 9.84 in) |
| 1700020294-01 | Printer port cable kit (42 cm / 16.5 in) |
| 1701090401 | Single port RS-232 cable with bracket (40 cm / 15.7 in) |
| 1700002204 | Dual port USB 2.0 cable (27 cm / 10.6 in) with bracket |
| 1700008461 | Four port USB 2.0 cable (30.5 cm / 12 in) with bracket |
| 1700020277-01 | Dual port USB 3.0 cable with bracket (30 cm / 11.8 in) |
| 1700019268-11 | Cable for onboard KBMS1 connector (35 cm / 13.7 in) |
| 1960063434N000 | Cable bracket for 1700019268-11 (4U) |
| 1700029038-01 | BMC VGA cable with bracket (35 cm / 13.7 in, for G4 SKU) |
| PCA-COM232-00A1E | 4 ports RS-232 module to LPC connector |
| PCA-COM485-00A1E | 4 ports RS-485 module to LPC connector |
| PCA-TPM-00B1E | TPM 2.0 Module by LPC |

Note: Users need to purchase ASMB-787's proprietary CPU cooler from Advantech Other brands' CPU coolers may NOT be compatible with ASMB-787.

I/O View



ASMB-787G4-00A1



ASMB-787G2-00A1